



Connecting *Shaping*, Climate Change, and Sustainable Living

Mass Audubon's *Shaping the Future of Your Community* Outreach and Assistance Program works on a local level to reduce the effects of climate change and promote green, sustainable living. We assist communities in reducing their heat-trapping gases that contribute to climate change by promoting energy conservation, clean, renewable sources of energy, and sustainable development. By connecting municipal leaders with tools to support open space conservation, we work to keep the state's forested and natural (carbon-absorbing) lands intact, helping communities save land *and* money while bolstering local economies and reducing our dependence on foreign oil.

This work is performed as part of Mass Audubon's Strategic Plan (Mass Audubon 2010 – 2015 Strategic Plan), as well as Mass Audubon's climate change policy (*Sustaining People and Nature in a Rapidly Changing Climate*; June 10, 2010).

Decreasing Heat-trapping Gases

We all contribute to climate change through the carbon dioxide emitted from the burning of fossil fuels (coal, gas, and oil) used to power, heat, and cool our homes as well as operate our vehicles.

- The *Shaping* program helps communities reduce vehicle miles traveled, lowering transportation-related emissions by encouraging compact (vs. sprawling) development, walkable village centers, regional bike lanes, and other smart growth techniques.
- The *Shaping* program helps communities understand and adopt the principles of the Commonwealth's Green Communities Act, including:
 - ✓ Adopting a Stretch Code appendix to the local building code to increase energy efficiency in new construction and advance the use of renewable energy;
 - ✓ Adjusting community zoning to allow for easier implementation of for renewable energy projects;
 - ✓ Measuring a baseline of the municipal government's energy use with a plan to reduce use by 20 percent within five years;
 - ✓ Expanding the use of fuel-efficient vehicles for municipal use; and
 - ✓ Accessing the State grants that are available to Green Communities.

Preparing for Climate Change

The *Shaping* program helps communities prepare for anticipated effects of climate change by protecting the water we drink and the air we breathe, and by protecting habitat corridors for wildlife:

Water: Climate change is expected to cause increased frequency of summer droughts as well as more intense storms and flooding events. Natural flood controls (wetlands, flood plains, and absorbent landscapes) can be achieved through using tools such as:

- Low Impact Development, stormwater management regulations and utility districts, aquifer protection bylaws/ordinances, and local wetlands protection provisions; all of which mimic or help maintain the landscape's natural ability to absorb and filter rainwater after a storm event.

Resilient Landscapes: Protecting large areas of forest provides clean air for humans and needed corridors for wildlife, aiding the ability of wildlife to adapt to changing local conditions that result from climate change.

Keeping Carbon-Absorbing Lands Intact

- The *Shaping* program works with local planning officials to reduce sprawling land development patterns. Large houses on large lots diminish our remaining forestlands more quickly, and release carbon dioxide stored in the soil. Forests absorb about 10 percent of the state's heat-trapping carbon dioxide emissions, filter drinking water and provide clean air for people and wildlife. Modifications to local land development rules can help preserve forests and other "green infrastructure" while reducing local government infrastructure costs, such as pavement and stormwater system maintenance.
- The *Shaping* program aids individuals and town officials in identifying and protecting important open space and preserving important local historic icons in their communities through use of Open Space Residential Design, Transfer of Development Rights, Chapter 61, Community Preservation Act, and other tools.
- The *Shaping* program helps communities access available grants and other funding sources to support their land protection projects and other efforts to put them on the pathway to a sustainable future.